SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

Be it known that I, Toby Wexler, a citizen of the United States of America and a resident of Lafayette, Louisiana, have invented a new and useful Animal Protective Collar apparatus of which the following is a specification.

APPLICATION FOR PATENT

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INVENTION: Apparatus and Method for Partially Encapsulating an Animal's Head

SPECIFICATION

1. FIELD OF THE INVENTION

This invention relates generally to animal protective collars used to prevent licking and biting of surgical dressings, medicated wounds, etc., and more particularly to a more versatile adaptive apparatus having interchangeable components for accommodating various species and/or breeds. This invention, being an extension of the technology previously disclosed in my U.S. Patent **6,382,140** Issued **5/7/2002,** is hereby incorporated by reference.

2. GENERAL BACKGROUND

E-collars or "Elizabethan" collars, so called in view of their Elizabethan era appearance, have long been used in veterinary practice to protect an animal's head or prevent contact between an animal's head and other parts of its body. The collars are used, for instance, after surgery to prevent an animal from biting or chewing at dressings or areas below its neck, or from pawing or scratching at dressings or areas on or about its head.

2.1 Frequently such collars have taken the general shape of a funnel or truncated cone. E-collars are usually closed around the animal's neck and retained in place by interlocking tabs, snaps, lacing, staples, and the like. The E-collars are usually provided in a variety of sizes or size ranges to accommodate animals of various sizes, and the effective size range of a particular collar is often limited by the closure mechanism used. Such closure mechanisms are usually cumbersome and time-consuming to attach and remove and the collars are most often much larger than necessary.

2.2 Examples of such collars include both reusable and disposable collars. More recently E-collars include closure mechanisms that involve the use of hook and latch type closures provided on both ends of a collar for allowing some degree of adjustability. However, if not secured properly, the animals may remove the device very quickly or harm themselves in the process. In some cases the E-collar is attached to the animal's existing collar, further encumbering the removal and attachment process. E-collars, due to their construction from a flat

plastic sheet, often cause skin irritation as a result of sharp edges.

2.3 What is needed is a collar that is quickly and easily attachable and removable and which accommodates a wide variety of sizes within a breed or species. For example, a dog collar should not be used for cats. Nor should one attempt to cut down a universal collar to fit a smaller animal. The collars should also be free from sharp edges.

3.0 SUMMARY OF THE INVENTION

An animal collar used to limit range and motion and protect an animal's head; the collar includes a hollow, hemispherical shaped shell with optional detachable cylindrical or conical rings and a pivotal visor. The shell being a hollow, transparent, hemispherical shape with an irregular aperture therein, in combination with the pivotal visor forms a parabolic cutout for closing the irregular aperture around an animal's neck. Hook and latch elements secure the visor in position relative to the hemispherical portion, thereby capturing and partially encapsulating the animal's head.

4.0 BRIEF DESCRIPTION OF THE DRAWINGS

For a further understanding of the nature and objects of the present invention, reference should be made to the following detailed description taken in conjunction with the accompanying drawings, in which, like parts are given like reference numerals, and wherein:

FIG. 1 is an isometric exploded view of the animal collar apparatus with optional cylindrical ring;

FIG. 2 is an isometric exploded view of the animal collar apparatus with optional conical ring;

FIG. 3 is a rear isometric assembly view of the animal collar apparatus with optional cylindrical ring;

FIG. 4 is a front isometric assembly view of the animal collar apparatus with optional cylindrical ring;

FIG. 5 is a rear isometric assembly view of the animal collar apparatus with optional conical ring;

FIG. 6 is a front isometric assembly view of the animal collar apparatus with optional conical ring;

FIG. 7 is a cross section view of the animal collar apparatus with optional cylindrical ring with visor in the closed position;

FIG. 8 is a cross section view of the animal collar apparatus with optional conical ring; and

FIG. 9 is a side elevation view of the animal collar apparatus with optional cylindrical ring with the visor in the open position.

FIG. 10 is an exploded view of the animal collar apparatus with optional cylindrical ring and adaptive conical ring;

FIG. 11 is a side elevation cross section of the optional cylindrical ring and adaptive conical ring assembly with visor closed ;

FIG. 12 is a side elevation of the optional cylindrical ring and adaptive conical ring assembly with visor in the open position.

5.0 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

As illustrated in **Fig. 1,** and **Fig. 2.** the animal head covering serving as an e-collar is a hollow hemispherical shaped assembly **10.** The hemispherical assembly **10,** as seen from the rear in **Fig. 1,** the hemispherical portion **14** is generally made of a lightweight, transparent or semitransparent, polymeric material and is generally sized to accommodate the average cat's head. However, various models may be provided to accommodate larger, wild felines, dogs, and smaller animals, such as kittens and small mammals. The hemispherical assembly **10** may also be lightly tinted to provide a more calming effect on the animal. The cylindrical extension ring **12** and the hemispherical portion **14** are removably fastened one to the other at a diametrical parting line **16** along the major diameter of the hemispherical assembly **10.** A hinged visor member **18** is effectively captured and pivotal at the connection point of the hemispherical portion **14** at the parting line **16.** A hook and latch fastening located at each side of the parabolic notch **24** and aperture **25** (shown on only one side for clarity in **Fig. 1** and **2**) is provided for securing the visor member **18**

to the lower hemispherical portion **14,** composed of a strap portion **20** and a pad portion **22.**

5.1 As seen in **Fig. 2,** the cylindrical extension ring portion **12** is attached to the hemispherical portion **14** at the equatorial parting line **16** by fasteners **19** strategically place around the equatorial parting line **16.**

5.2 Looking now at the hemispherical assembly **10** as seen disassembled in **Fig. 3,** the visor member **18** is pivotal about the pins **21** and includes a relatively large parabolic shaped notch **24** along one edge. It should also be noted that the cutout edge is rolled outwardly and may include a soft material bonded or otherwise attached thereto. The soft bonded material may also be added to the leading edge **26.** In general the visor **18** is a flexible, semi-rigid, transparent or opaque member.

5.3 The hemispherical member **14** is a transparent, lightweight, polymeric member and includes an irregular aperture **25** that begins at the polar region and extends relatively close to the parting line **16,** and is rolled inwardly and may also be fitted with a soft edging material.

5.4 As earlier stipulated the cylindrical extension ring **12** is optional and attachable with the fasteners **19** and may also include a bonded soft edging material along its leading edge **13.**

5.5 Looking now at **Fig. 4** we see that the hemispherical assembly **10** can just as easily be fitted with a conical extension ring attachment **28** in the same manner

as the cylindrical ring attachment **12**. The conical attachment **28** is designed to extend slightly beyond the animals eyes. thereby preventing the animal from rubbing or scratching its head and thus perhaps injuring facial wounds etc. The leading edge **30** seen in **Fig. 5** may also be fitted with a protective edge molding.

5.6 As seen in **Fig. 6** the hemispherical collar assembly **10** is the same as that shown in **Figs. 1-3** except that the cylindrical ring member **12** is replace by a conical member **28**. The visor **18** is likewise pivotally captured between the hemispherical member **14** and the conical ring **28** at assembly.

5.7 Turning now to **Fig. 7** we see that when the visor **18** is pivotally rotated until the leading edge **32** is adjacent to or extending beyond the leading edge **13** of the ring **12**, the neck aperture **25** of the hemispherical member **14** and the parabolic shaped cutout **24** form an opening of sufficient size to allow the animals head **34** to pass into the hemispherical member **14**. The irregular opening is designed to accommodate a relatively wide range of animal neck sizes and allow for easy insertion of an animal's head. By rotating the visor **18** toward the animal, as seen in **Fig. 7**, the opening then becomes smaller to accommodate animals with small necks. Once an animal's head is captured between the visor member **18** and the hemispherical member **14**, the visor is secured in place by hook and loop fasteners **20, 22** for fast locking.

5.8 As seen in **Fig. 8** larger animals having a larger head and/or longer muzzle using the conical adapter **28** can still utilize the visor **18**; however it should be noted

that the opening in the hemispherical assembly **10** is limited by the leading edge **32** of the visor engagement with the conical adapter **28.** In such cases where an animal head **36** is too large to pass through the opening but has a relatively small neck, the conical adapter ring **28** is installed after the hemispherical assembly is placed around the animal's neck or a modified visor may be used that provides a larger neck opening.

5.9 Alternatively, the leading edge **13** of the cylindrical ring **12** can be beaded as seen in Fig. 7 and Fig. 9 and made cooperative with a snap channel **29** located at the small diameter of the conical extension member **28** seen in **Fig. 10,** thereby allowing the conical member to be snapped onto the cylindrical ring after the assembly has been placed on the animals head **36** as seen in **Fig. 11.** However, in some cases the conical member **28** may be provided with a slot **40** seen in **Fig. 11** for permitting the visor to pass through the conical member 28 as shown in **Fig. 12.** This allows a full length visor to be fully opened to allow passage o f the animal's head with the conical member in place.

At first glance it would seem that the visor **18** would interfere with the passage of the animal's head. However, it should be kept in mind that the entire assembly **10** can be rotated so that the visor **18** is on top thus providing passage of the animal's head **36** for a short time until the visor 18 is rotated towards the animal's neck and locked behind the animal's head.

5.10 In use, the hemispherical assembly **10** is opened to the fully open position, as seen in **Fig. 9,** then placed over an animal's head and secured around its neck, as seen in **Figs. 7**and **8.** The visor member **18** is then pivoted forward and held in this position by the user's left hand while the right hand rotates the globe **10** relative to the visor **18,** thereby capturing the animal's head **36,** as seen in **Fig. 8.** The visor member **18** is then secured in position with straps **20** in contact with pads **22.**

5.10 Because many varying and different embodiments may be made within the scope of the inventive concept herein taught, and because many modifications may be made in the embodiments herein detailed in accordance with the descriptive requirement of the law, it is to be understood that the details herein are to be interpreted as illustrative and not in any limiting sense.